

III. Remarks

A. Examiner's Interview

Applicant is grateful to the Examiner for the courtesy extended to the undersigned during the telephone interview conducted on June 28, 2007. The Examiner stated that the undersigned did not need to submit an interview summary.

B. Claim Objections

The Action objects to claims 49 and 53 under 37 CFR 1.75(c) as being in improper dependent form for failing to further limit the subject matter of a previous claim. The Examiner concludes that the method step of claim 49 does not appear to further limit the method step of parent claim 47. Applicant respectfully requests reconsideration of this objection. Claim 47 recites "wherein step (c) comprises receiving an identification of interval points for a plurality of intervals, said plurality of intervals being associated with at least two displayed heartbeats from said plurality of heartbeats." Claim 47 requires that the identified intervals points be for "a plurality of intervals." The "plurality of intervals" needs only be associated with at least two displayed heartbeats. Claim 47 does not require that there are a plurality of intervals for each of the at least two heartbeats, i.e., claim 47 allows for the particular intervals to extend from heartbeat to heartbeat (e.g., RR interval) or be self contained within a heartbeat (e.g., QT). In contrast, claim 49 requires a plurality of intervals for each of the least two heartbeats, e.g., (PR, QT, etc.). It is submitted, therefore, that the claims have different scope. Analogous arguments apply to claims 51 and 53.

Reconsideration and withdrawal of this objection are respectfully requested.

C. Claim Rejection under 35 U.S.C. §112

The Action rejects claims 6 and 16 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 has been amended as suggested by the Examiner to recite “interval duration measurement data on a display for medical evaluation.”

Claim 16 has also been amended to add “means for” before “automatically flagging.” Applicant is grateful to the Examiner for identifying this typographical error.

Withdrawal of the rejection of claims 6 and 16 are requested in view of the foregoing amendments.

D. Allowable Subject Matter

Applicant is grateful to the Examiner for allowing claims 1-5, 10-15, 20, 43 and 44 and for recognizing the allowable subject matter in claims 6 and 16, if amended as suggested, and their dependent claims 7, 8, 17, 18, 45 and 46, as well as the allowable subject matter in claims 23-25, 31, 34-36 and 42 if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

E. Rejection under 35 U.S.C. §102

1. U.S. Patent No. 5,669,391 to Williams

The Action rejects claims 21, 26, 27, 32, 37, 38, 47, 48, 50-52 and 54 as being anticipated by Williams. Reconsideration and withdrawal of the rejection are respectfully requested as discussed below.

Independent claim 21 is directed to a method of processing an ECG. In step (b), an ECG tracing image of a plurality of heartbeats is displayed on a display. Step (c) has been amended as follows: “after step (b), receiving from a user an identification of interval points for at least one interval on said displayed ECG tracing image to be measured.” This amendment clarifies that the interval points (e.g., Q onset, R, S, or T points) for at least one interval (e.g., RR, QT, QRS, or PR intervals) on the displayed ECG tracing image are received from the user. The interval is an interval that is “to be measured.” Therefore, the user selects the points that are then used in the measurement step (d): determining a time duration of said at least one interval based at least

in part on said identified interval points. Finally, as recited in step (e), annotation data is recorded that represents “said identified interval points” – i.e., the interval points identified by the user in step (c) and used in the measurement step (d). As discussed below, Williams clearly does not anticipate claim 21.

Williams discloses an implantable cardiac therapy device. ECG and device status information are uploaded to an external instrument 13 that synchronizes the two pieces of data and displays them, as shown in, for example, FIG. 5 or 6. Williams does not disclose interval points being received from a user after display of an ECG tracing image and for use in measuring at least one interval on the ECG tracing image, nor recording the points identified by the user as annotation data “wherein an annotated ECG tracing image showing markings corresponding to said identified interval points is developable from said digital ECG data and said digital annotation data.” Applicant believes that any points that may conceivably correspond to “interval points” in FIGS. 5 and 6 of Williams would be automatically identified using software algorithms. It is submitted, therefore, that the system/methodology of Williams is fundamentally different than the method recited in claim 21, particularly with respect to steps (c), (d) and (e).

For at least these reasons, it is submitted that claim 21 is not anticipated by and is allowable over the cited reference. Claims 26, 27, 47, 48, and 50 depend from claims 21 and are, therefore, also not anticipated by the cited reference.

Independent claim 32 recites features that parallel those of independent claim 21. It is submitted, therefore, that claim 32 is also not anticipated by the cited reference. Claims 37, 38, 51, 52 and 54 depend from claim 32 and are, therefore, also not anticipated by the cited reference.

Reconsideration and withdrawal of the rejection of claims 21, 26, 27, 32, 37, 38, 47, 48, 50-52 and 54 are respectfully requested.

2. U.S. Patent No. 5,669,391 to Powell

The Action rejects claims 21, 22, 28-30, 32, 33, 39-41 and 54 as being anticipated by Powell.

Like Williams, Powell discloses an implantable device (i.e., pacemaker) that can communicate with an external terminal shown in FIG. 2. The innovation of Powell relates to selection of different points along the Marker ChannelTM Diagram causing different explanatory messages to be displayed. This feature can be seen by comparing FIGS. 6 and 7. Notably, the Marker ChannelTM Diagram is not an ECG tracing image, but rather is believed (from a review of the reference) to be a diagram of the pacemaker's operation and the occurrence of physiological events that is illustrated according to some industry standard technique. (Col. 3, Lines 12-17). The only displayed ECG tracing appears to be at row 102 of FIG. 3. FIGS. 4-7 do not show ECG tracing images.

It is submitted that Powell does not disclose interval points being received from a user after display of an ECG tracing image and for use in measuring at least one interval on the ECG tracing image, nor recording the points identified by the user as annotation data "wherein an annotated ECG tracing image showing markings corresponding to said identified interval points is developable from said digital ECG data and said digital annotation data." Applicant believes that any points (other than the ECG image itself) shown in FIG. 3 of Powell are pacing artifacts 104, which do not correspond to interval point identifications received from a user that correspond to intervals to be measured. It is submitted, therefore, that the system/methodology of Powell is fundamentally different than the method recited in claim 21, particularly with respect to steps (c), (d) and (e).

For at least these reasons, it is submitted that claim 21 is not anticipated by and is allowable over the cited reference. Claims 22 and 28-30 depend from claim 21 and are, therefore, also not anticipated by the cited reference.

Claim 32 recites features that parallel those of claim 21. For at least the reasons set forth above, it is submitted that claim 32 and claims 33, 39-41 and 54, which depend from claim 32, are also not anticipated by the cited reference.

Reconsideration and withdrawal of the rejection of claims 21, 22, 28-30, 32, 33, 39-41 and 54 are respectfully requested.

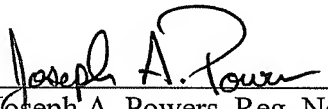
IV. Conclusion

In view of the foregoing remarks and amendments, Applicant submits that this application is in condition for allowance at an early date, which action is earnestly solicited.

The Commissioner for Patents is hereby authorized to charge any additional fees or credit any excess payment that may be associated with this communication to deposit account **04-1679**.

Respectfully submitted,

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